

**Claim Amendments**

1. (Currently Amended) A method, comprising

determining that a device related operation happens in a virtual machine by a kernel component of a virtual machine monitor through an operation transition from the virtual machine to the kernel component; and

determining whether the device related operation can be handled by a first virtual input/output device installed inside of the kernel component of the virtual machine monitor.

2. (Currently Amended) The method of claim 1, wherein the first virtual input/output device comprises at least one of a virtual keyboard, virtual mouse, virtual audio device, virtual video device, virtual event timer and virtual interrupt controller.

3. The method of claim 1, wherein the virtual machine monitor is a hybrid virtual machine monitor.

4. The method of claim 3, wherein the kernel component is a hypervisor of the hybrid virtual machine monitor.

5. The method of claim 1, wherein the virtual machine monitor is a host virtual machine monitor.

6. (Currently Amended) The method of claim 5, wherein the kernel component is ~~an in-kernel~~ a kernel virtual machine monitor ~~of a host operating system~~.

7. (Currently Amended) The method of claim 1, further comprising:  
passing the device related operation to a second virtual ~~input/output~~ device installed outside of the kernel component of the virtual machine monitor, in response to determining that the device related operation can not be handled by the first virtual ~~input/output~~ device.

8. (Currently Amended) The method of claim 1, further comprising:  
initiating an interrupt by the first virtual ~~input/output~~ device; and  
injecting the interrupt from the first virtual ~~input/output~~ device to the virtual machine through another operation transition from the kernel component to the virtual machine.

9. (Currently Amended) A virtual machine monitor, comprising a kernel component to determine that a device related operation happens in a virtual machine

through an operation transition from the virtual machine to the kernel component, wherein the kernel component further comprises a first virtual ~~input/output~~ device.

10. (Currently Amended) The virtual machine monitor of claim 9, wherein the first virtual ~~input/output~~ device comprises at least one of a virtual keyboard, virtual mouse, virtual audio device, virtual video device, virtual event timer and virtual interrupt controller.

11. The virtual machine monitor of claim 9, wherein the virtual machine monitor is a hybrid virtual machine monitor.

12. The virtual machine monitor of claim 11, wherein the kernel component is a hypervisor of the hybrid virtual machine monitor.

13. The virtual machine monitor of claim 9, wherein the virtual machine monitor is a host virtual machine monitor.

14. (Currently Amended) The virtual machine monitor of claim 13, wherein the kernel component is ~~an in-kernel~~ a kernel virtual machine monitor of a host operating system.

15. (Currently Amended) The virtual machine monitor of claim 9, further comprising:

a second virtual ~~input/output~~ device installed outside of the kernel component of the virtual machine monitor to handle the device related operation in response to determining that the device related operation can not be handled by the first virtual ~~input/output~~ device.

16. (Currently Amended) The virtual machine monitor 9, wherein the first virtual ~~input/output~~ device is further to initiate an interrupt and inject the interrupt from the first virtual ~~input/output~~ device to the virtual machine through another operation transition from the kernel component to the virtual machine.

17. (Currently Amended) A ~~machine-readable~~ computer-readable medium comprising a plurality of instructions which when executed result in an apparatus:

determining that a device related operation happens in a virtual machine by a kernel component of a virtual machine monitor through an operation transition from the virtual machine to the kernel component;

determining whether the device related operation can be handled by a first virtual hardware device installed inside of the kernel component of the virtual machine monitor; and

passing the device related operation to a second virtual hardware device installed outside of the kernel component of the virtual machine monitor, in response to determining that the device related operation can not be handled by the first virtual hardware device.

18. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 17, wherein the first virtual hardware device comprises at least one of a virtual input/output device, virtual interrupt controller, and virtual event timer.

19. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 17, wherein the second virtual hardware device comprise at least one of a virtual input/output device, virtual interrupt controller, and virtual event timer.

20. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 17, wherein the virtual machine monitor is a hybrid virtual machine monitor.

21. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 17, wherein the kernel component is a hypervisor of the hybrid virtual machine monitor.

22. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 17, wherein the virtual machine monitor is a host virtual machine monitor.

23. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 17, wherein the kernel component is ~~an in-kernel~~ a kernel virtual machine monitor ~~of a host operating system~~.

24. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 17, wherein the plurality of instructions further result in the apparatus:

initiating an interrupt by the first virtual hardware device; and

injecting the interrupt from the first virtual hardware device to the virtual machine through another operation transition from the kernel component to the virtual machine.

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